

QUESTION
 A 60-year-old male patient with a long history of hypertension and a recent diagnosis of type 2 diabetes mellitus is being treated with lisinopril and metformin. He has been experiencing increasing fatigue and weakness over the past few weeks. His most recent laboratory tests show a hemoglobin level of 10 g/dL, a hematocrit of 30%, and a mean corpuscular volume (MCV) of 80 fL. The patient's diet is generally healthy but he has been eating less recently due to his symptoms.

Parameter	Value	Reference Range
Hemoglobin (Hb)	10 g/dL	13.5-15.5 g/dL
Hematocrit (Hct)	30%	40-50%
Mean Corpuscular Volume (MCV)	80 fL	80-100 fL
Red Blood Cell Count (RBC)	3.5 million/mm ³	4.5-6.0 million/mm ³
White Blood Cell Count (WBC)	8,000/mm ³	4,000-11,000/mm ³
Platelet Count	150,000/mm ³	150,000-400,000/mm ³
Serum Ferritin	100 ng/mL	50-200 ng/mL
Serum Iron	100 µg/dL	50-150 µg/dL
Total Iron Binding Capacity (TIBC)	300 µg/dL	250-350 µg/dL
Transferrin Saturation (TSAT)	33%	20-50%

ANSWER

The patient's clinical presentation and laboratory findings are consistent with iron deficiency anemia. The low hemoglobin level, low hematocrit, and low MCV (microcytic anemia) are characteristic of this condition. The patient's symptoms of fatigue and weakness are also consistent with iron deficiency. The laboratory tests show a low serum ferritin level, which is a marker of iron stores, and a low transferrin saturation (TSAT) level, which indicates a low amount of iron in the transferrin protein. The patient's diet and recent weight loss may contribute to his iron deficiency.

The patient's hypertension and type 2 diabetes mellitus are not directly related to his iron deficiency. However, the patient's use of metformin may contribute to his iron deficiency, as metformin can interfere with iron absorption. The patient's use of lisinopril is not likely to be related to his iron deficiency.

The patient's iron deficiency anemia should be treated with oral iron supplements. The patient should also be advised to eat a diet rich in iron, such as red meat, poultry, fish, and leafy green vegetables. The patient's symptoms should improve with treatment.